

WADDINGTON
Appl. No. 09/913,463
April 21, 2005

AMENDMENTS TO THE DRAWINGS

Proposed changes are shown in red on an attached copy of the drawings. Replacement sheets are also attached.

Attachment: Replacement Sheet(s)
Annotated Sheet Showing Changes

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

In response to the rejection of claims 1-16 under 35 U.S.C. §112, second paragraph, all original claims have been cancelled and rewritten as new claims 17-33. In drafting the new claims, care has been taken to avoid the Examiner's objections to the original claims.

Accordingly, all outstanding formal issues are now believed to have been overcome.

The Examiner's attention is drawn to the attached copy of a European Examination Report in a European counterpart. It is noted that the new set of claims herewith submitted have recently been found allowable at the EPO.

New independent claim 17 corresponds to original claim 1 amended for clarity to clearly indicate that the first process comprises steps to make a reservation for access to a resource of a computer and that the second process comprises the granting of a request for access to said resource in dependence on said reservation. New claim 17 has been further amended to indicate that the first resource access requirement definition ("RARD#1") is hardware independent, whereas the second resource access requirement definition ("RARD#2") is hardware dependent. There is general support for this amendment on page 2, at lines 19 to 24 of the description as originally filed. Embodiments of a hardware independent RARD#1 are described on page 6, lines 7 to 8 and page 9, lines 9 to 10 which indicate that the first resource access requirement definition may comprise a demand level indicator given as a percentile of the required resource.

A person skilled in the art would therefore find it apparent that RARD#1 is hardware independent whereas RARD#2 is hardware dependent.

New claim 18 is based on original claim 2.

New claim 19 incorporates the features of old claim 2 and finds further support from page 2, line 20 of the description which describes how scheduling means 12 translates the hardware independent RARD#1 into RARD#2 which is hardware dependent (i.e., having a form dependent on the platform supporting the scheduling means 12 (see page 2, lines 20 to 22 of the description for support).

New claim 20 recites the feature of RARD#2 having a form suitable for use by a CPU reservation component 13 or a memory reservation component 14, 15 of the computer. This new claim is supported by the description, for example by page 5, lines 20 to 24, page 2, lines 24 to 25, and page 10, lines 14 to 15. A person skilled in the art would clearly understand that the hard disk reservation component 14 and memory reservation component 15 comprise forms of memory reservation component (in particular, on page 10, lines 14 to 15 it is clearly indicated that some portions of memory may reside on a disk 10 or backing store).

New claim 21 is based on old claim 3, but further clarifies how the request for access to the CPU resource of the computer is granted (by the CPU secondary scheduler 16) only after CPU access has been reserved (after the CPU primary scheduler 12 has instantiated the CPU reservation component 12), (see page 6, lines 5 to 9, 19 to 26, and page 7, lines 4 to 8, and 15 to 16).

New claims 22, 23 and 24 are based on old claims 5, 6 and 7 respectively, with their dependencies changed. Old claim 8 has been deleted without prejudice.

New claim 25 is based on old claim 9, now amended into a dependent form.

New claim 26 is based on old claim 10.

New claim 27 is dependent on claim 20 and is supported by description on page 5, lines 20 to 24.

New claim 28 is based on old claim 4, but further clarifies how the scheduling process reserves memory storage on said mass storage device prior to said request for access to said mass storage device being granted. See page 2, lines 24 to 25, and page 9, lines 10 to 16, and 19 to 29).

New claim 29 is based on old claim 13, now cast into a form dependent on claim 28.

New claim 30 is based on old claim 14, now cast into a form dependent on claim 28.

New claim 31 is based on the description at page 5, lines 20 to 24, and page 10, lines 16 to 17, 22 to 23, and page 11, line 24 (see also page 10, line 8, to page 12, line 19 for a general description of this aspect of the invention).

New claims 32 and 33 are equivalent to original claims 15 and 16.

The rejection of claims 1-4, 12 and 15-16 under 35 U.S.C. §103 based on Baugher ('465 or '595) in view of Jones '489 is respectfully traversed. Since two Baugher references ('465 and

'595) are of record, it is perhaps unclear which Baugher reference is being relied upon by the Examiner. However, based upon column and line number citations, it is presently assumed that the Examiner intended to rely upon Baugher '595 and comments below are made in accordance with this assumption.

Instead of utilizing language actually found in the Baugher '595 reference, the Examiner has quoted or paraphrased the applicant's claim language and then made citations to certain passages in the reference that supposedly support the language that has been quoted from applicant's claim. However, the undersigned cannot correlate any such teaching of Baugher '595 with the language the Examiner has associated therewith.

For example, the Examiner alleges that something at column 2, lines 11-16 and/or column 9, lines 66-67 through column 10, lines 1-8 constitute a teaching of "running a first process to make a reservation for access to a resource in dependence on a resource requirement communication from an application process". However, column 2, lines 11-16 of Baugher '595 describe deficiencies in prior art which permitted unconstrained use of priorities that actually flooded a token ring with priority traffic such that multi-media traffic obtains no guaranteed priority. The passage at column 9 – column 10 deals with a configuration sub-system parsing an initialization file and storing information concerning device, connectivities, speeds, reservable capacity, etc. In short, neither of the passages cited by the Examiner appear to in any way teach running a first process to make a reservation for access to a resource in dependence upon a resource requirement communication from an application process.

Similar difficulties are encountered when trying to correlate the Examiner's quotations or paraphrasing of applicant's claim language with other cited portions of the reference specification teaching.

With such fundamental deficiencies of Baugher (in addition to the Examiner's admitted deficiency in that Baugher admittedly fails to teach a scheduling means for a reservation system), it is not believed necessary to further catalog additional deficiencies of either or both of these references.

The rejection of claims 5-7 and 9-11 under 35 U.S.C. §103 as allegedly being made "obvious" based on the single Papworth et al. '245 reference is also respectfully traversed.

Once again, the Examiner has quoted or paraphrased portions of the applicant's claim language and then merely cited to sections of the reference as allegedly providing such teaching. However, the undersigned has been unable to find any such teaching.

For example, column 16, lines 2-7 and column 5, lines 8-11 of Papworth does not appear to teach or suggest "generating a one dimensional (array) reservation request pattern (reservation information and data array)". Instead, column 5, lines 8-11 merely describes four different types of instructions Papworth allocates between (1) a re-order buffer (ROB); (2) a reservation station (RS); (3) a store buffer and (4) a load buffer. Column 16, lines 2-7 merely describe the physical address buffer 600 being coupled to receive a physical address input from the translation lookaside buffer of the memory execution unit which is, in turn, coupled to produce a physical address to tag array 601 that is, in turn, coupled to receive an input (either a store address or a load address) from the memory order buffer of the memory execution unit. It is not at all clear

from this that the “tag array” 601 or any other data “array” in Papworth constitutes a one dimensional reservation request pattern.

Similar problems are encountered when trying to understand the Examiner’s allegations regarding the “merging...” aspect of claim 5.

Furthermore, the Examiner admits that Papworth fails to teach “not substantially disturbing either the reservation request pattern or the reserved CPU access time slots in the reservation request pattern”. To support an argument that such would have been found “obvious”, the Examiner alleges that anything less would necessarily “corrupt” the pattern. That, in turn, of course assumes that Papworth teaches a “reservation request pattern” and that changes thereto would necessarily “corrupt” the pattern in some undesirable way.

With such fundamental deficiencies already noted with respect to independent claim 5, it is not believed necessary to further describe the additional deficiencies of this reference with respect to other claims.

The rejection of claim 8 under 35 U.S.C. §103 as allegedly being made “obvious” based on Baugher (‘595 or ‘245?) in view of Jones ‘489 and in further view Papworth et al. ‘245.

Fundamental deficiencies of Baugher and Papworth have already been noted above with respect to parent claim 1. Original dependent claim 8 does not have a direct counterpart in the new set of claims. Accordingly, it is not believed necessary to further discuss the deficiencies of these references.

The rejection of claim 13 under 35 U.S.C. §103 as allegedly being made “obvious” based on Baugher (‘595 or ‘245?) in view of Nakahara ‘225 is also respectfully traversed.

Original claim 13 now corresponds to dependent claim 29 as noted above. In the new set of claims, this claim is ultimately dependent from new independent claim 17. Fundamental deficiencies of the primary Baugher reference have already been noted above with respect to parent claim 17 (which corresponds to original claim 1 in many respects), and accordingly it is not believed necessary to discuss the further deficiencies of these references at this time.

The rejection of claim 14 under 35 U.S.C. §103 as allegedly being made “obvious” based on Baugher (presumably ‘245) in view of Baugher ‘595 is also respectfully traversed.

This ground of rejection appear to confirm applicant’s earlier expressed assumption that all earlier grounds of rejection based on Baugher are actually made with respect to Baugher et al. ‘245.

Original claim 14 now corresponds to new claim 30 which is dependent, ultimately, from independent claim 17 as also noted above for original claim 13. Accordingly, for similar reasons, it is not believed necessary at this time to further discuss this ground of rejection.

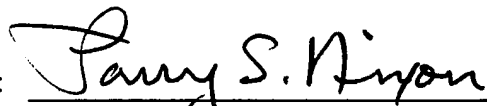
Especially as now amended to overcome formal grounds of objection/rejection, it is not believed that any of the prior art now of record teaches or suggests the invention(s) now being claimed.

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Accordingly, this entire application is now believed to be in allowable condition and a formal Notice to that effect is respectfully solicited.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 
Larry S. Nixon
Reg. No. 25,640

LSN:vc
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100



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PROPOSED DRAWING AMENDMENTS

FOR SN 09/913,463

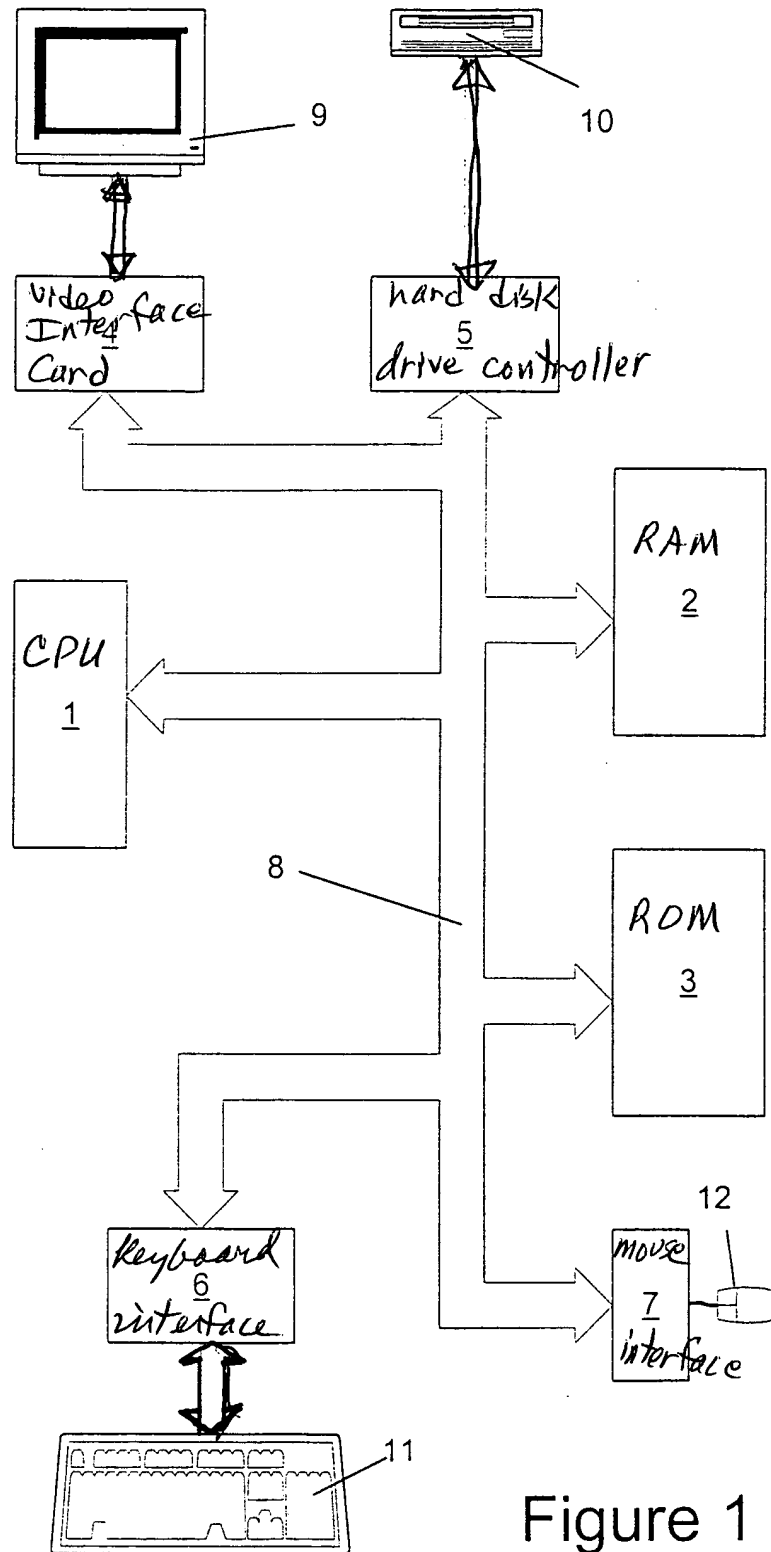


Figure 1

PROPOSED DRAWING AMENDMENTS

FOR SN 09/913,463

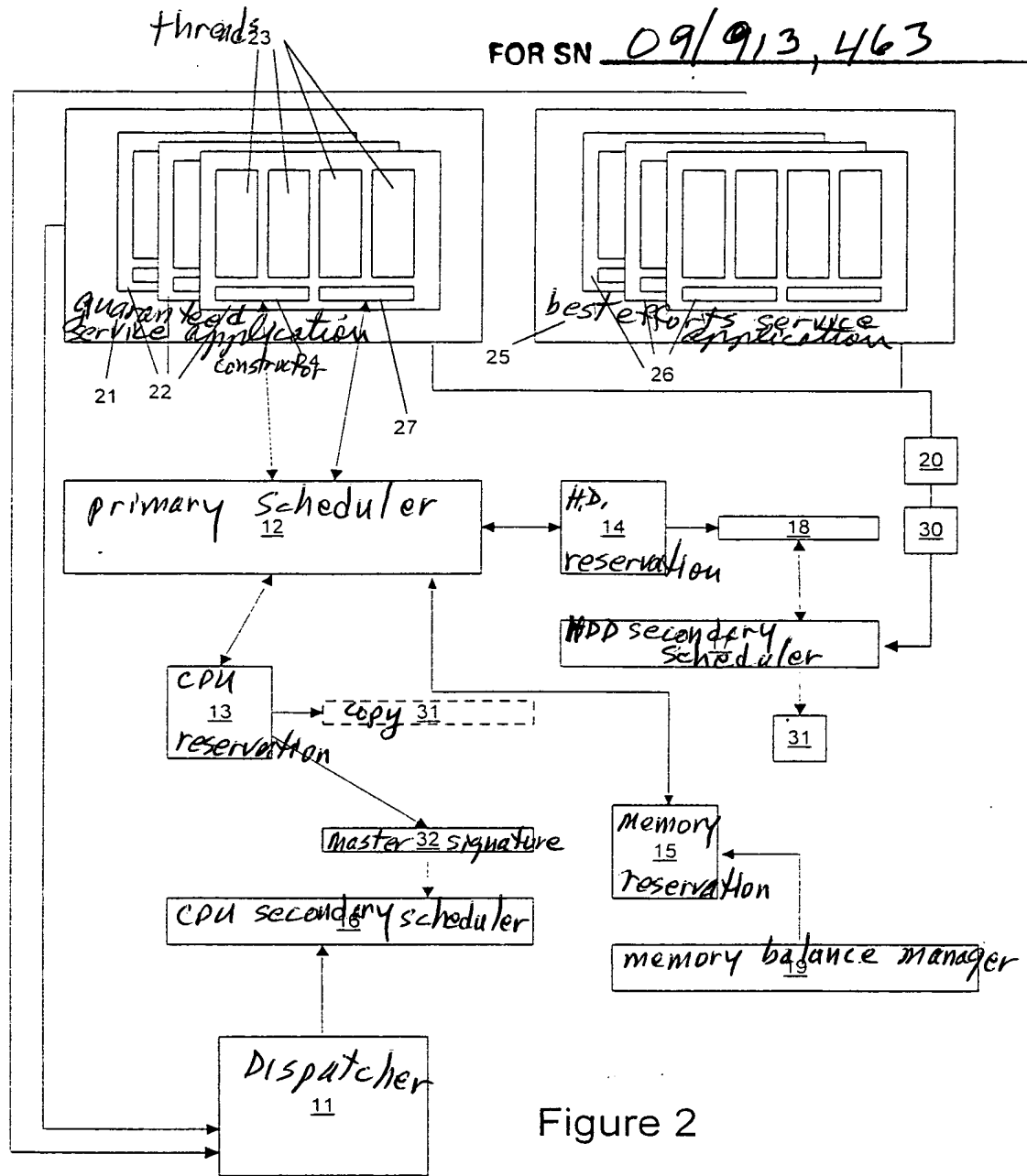
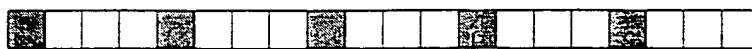


Figure 2

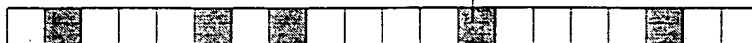
PROPOSED DRAWING AMENDMENTS
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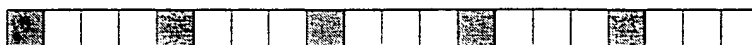
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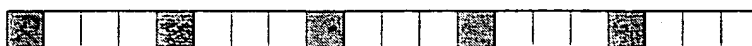
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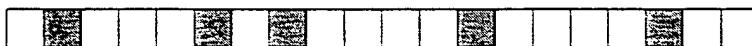
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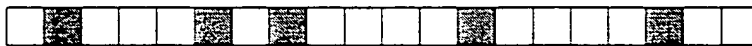


Figure 3

Figure 3

PROPOSED DRAWING AMENDMENTS
FOR SN 09/913,463

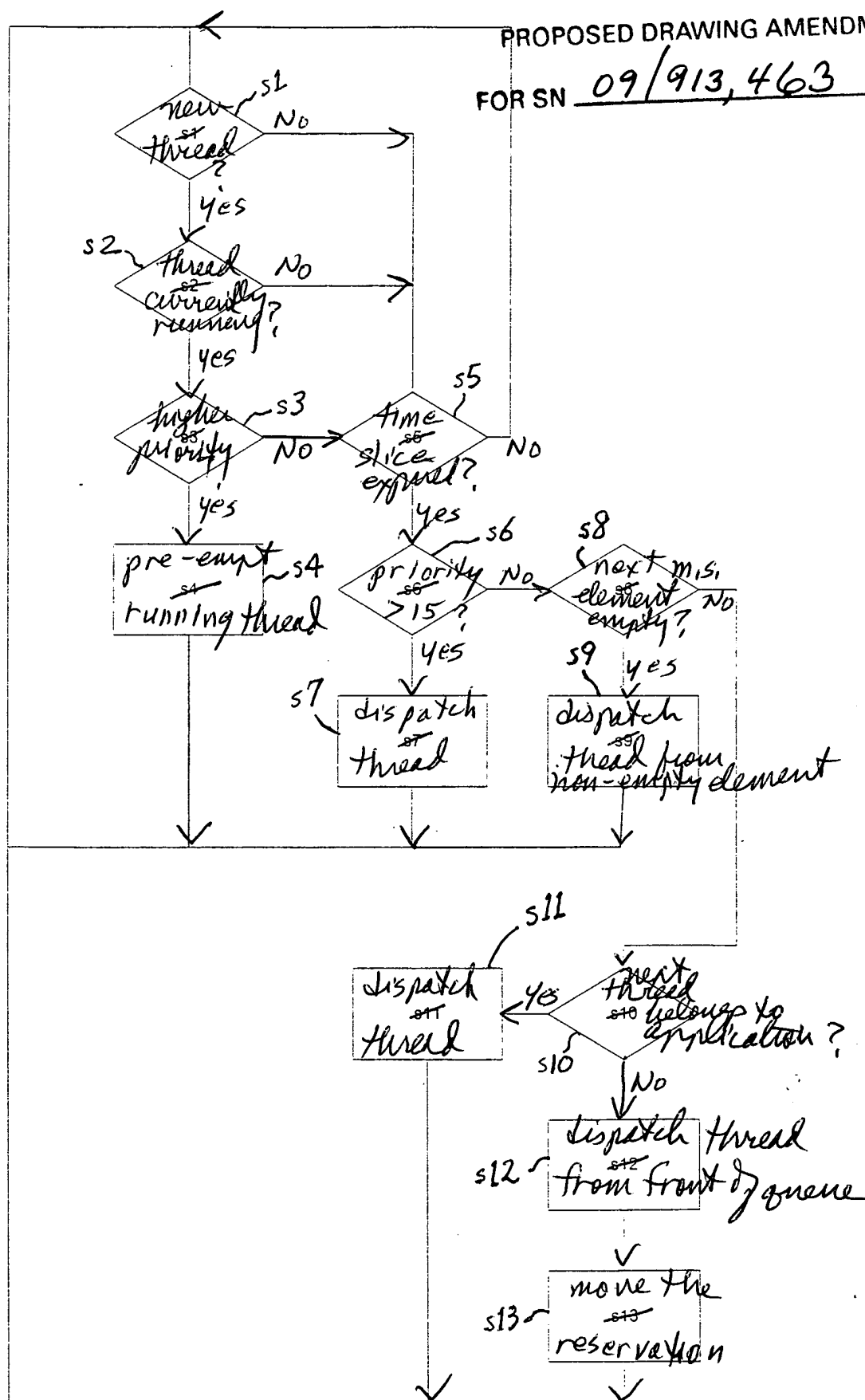


Figure 4
(CPU SECONDARY SCHEDULER)

PROPOSED DRAWING AMENDMENTS

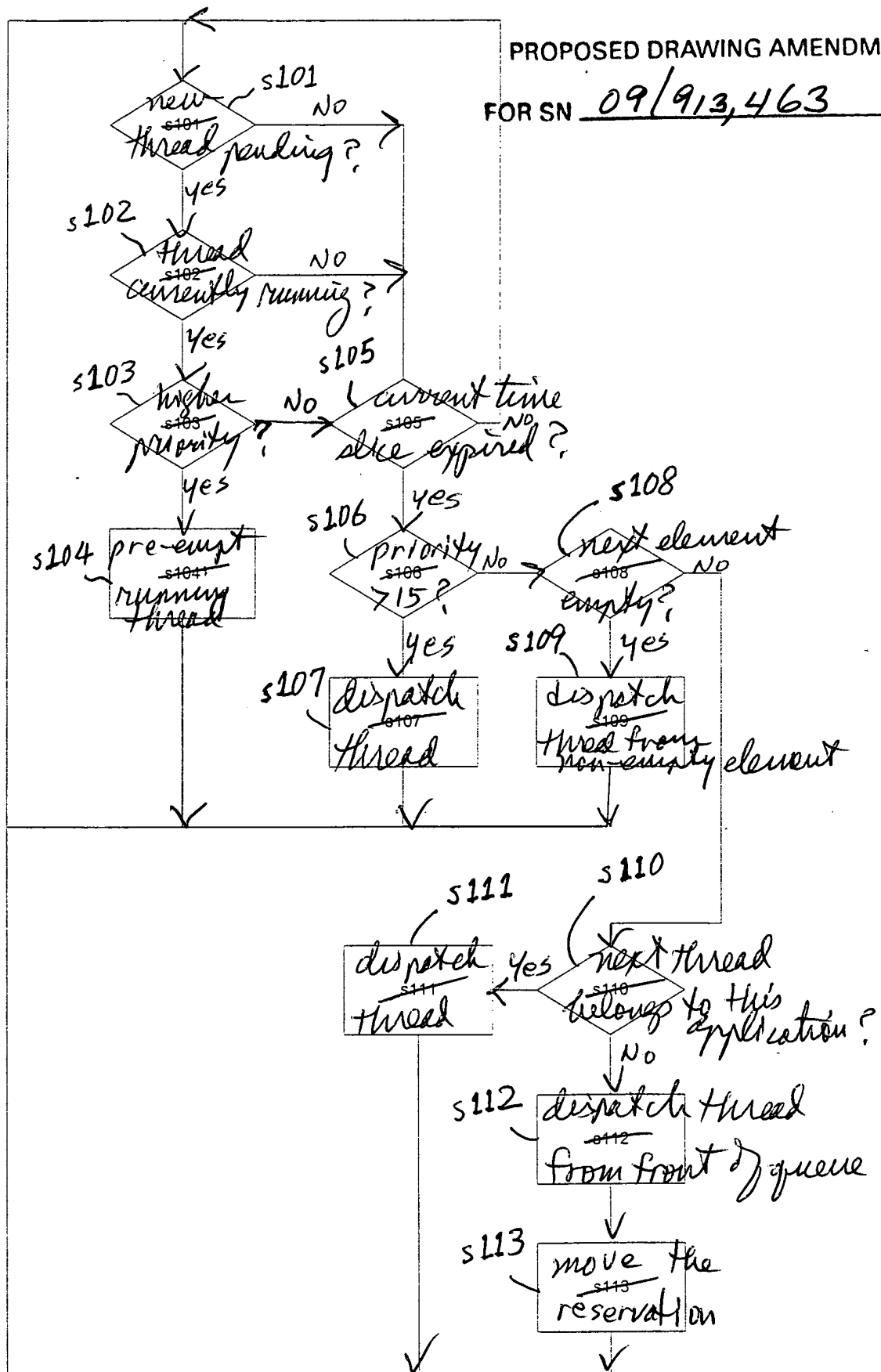
FOR SN 09/913,463

Figure 5

(ALTERNATE CPU SECONDARY SCHEDULER)